

Exhibit 2

Defendants' Proposed Amended Charts

Invalidity of Asserted Claims of U.S. Patent No. 7,532,200
Under 35 U.S.C. §§ 102(a),(b) and 103 by Japanese Patent Application No. JP3090806 (U)¹

Based upon the claim interpretations Better Mouse Company, LLC (“BMC”) appears to be asserting and the applications of those interpretations to Defendants’ products in BMC’s Infringement Contentions, **JP3090806 (U)** anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants’ Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	’200 Claim Language	JP3090806 (U)
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	JP3090806 (U) discloses an apparatus that sets multi-stage displacement resolution of a mouse. <i>See, e.g.</i> , ¶ 0004 (describing the invention as an “adjustable mouse ... [with] a speed change key ... [to] change the degree of analysis of this mouse directly by the switching operation of this speed change key, [which] changes the movement speed on the monitor”).
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	JP3090806 (U) discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse. <i>See, e.g.</i> , ¶ 0005 (“An image sensor can detect change of a movement zone, and it can convert to the degree of

¹ Japanese Utility Model Application No. JP3090806 (U) was published on October 9, 2002, which was well before the January 18, 2005, filing date of U.S. Patent No. 7,532,200 (“the ’200 Patent”). JP3090806 (U) therefore constitutes prior art under 35 U.S.C. §§ 102 (a) and (b). To the extent that JP3090806 (U) is found not to anticipate one or more claims of the ’200 Patent under 35 U.S.C. §102, JP3090806 (U) renders those claims obvious under 35 U.S.C. §103 when combined with other art identified in Defendants’ Invalidity Contentions. It would have been obvious to combine the teachings of JP3090806 (U) with other art identified in Defendants’ Invalidity Contentions at least because the references all pertain to setting multi-stage displacement resolution of a computer mouse directly through a switch on the mouse.

	'200 Claim Language	JP3090806 (U)
		analysis, and a x axis and y axis coordinates can be input....”).
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	JP3090806 (U) discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, without the use of a software driver/tool running on a computer to which the mouse is connected. <i>See, e.g.</i> , ¶ 0006 (“A speed change key or a push button is connected with the microcontroller, 2 or more sets of different analysis degree control programs are incorporated in this microcontroller, and selection use of the mouse of this design is carried out with a speed change key or a push button. When using the above structure, directly by control of this speed change key or a push button, [c]hoose one analysis degree program in a microcontroller, and it enables it to read a picture signal by the speed which is the degree of analysis from which an image sensor differs....”). On information and belief, the mouse microprocessor disclosed in JP3090806 (U) must have “pins.” Pins are necessary for an integrated circuit such as a microcontroller to electrically interface with other electrical components and/or a circuit board. Since the microcontroller of JP3090806 (U) electrically interfaces with several other electrical components, it necessarily includes pins.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the	On information and belief, a person of ordinary skill in the art knows that all microcontrollers necessarily have multiple registers and that any parameter calculated or read by the microcontroller must be stored for some period of time in a register in the microcontroller. JP3090806 (U) discloses a microcontroller that sets mouse resolution (and stores it in a register) based on the states of the resolution setting pins. The states of the resolution setting pins are determined by the speed change key or push button 5. JP3090806 (U) further discloses that the mouse micro controller responds to the distance and moving direction sensed by

	'200 Claim Language	JP3090806 (U)
	register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register. <i>See, e.g.</i> , ¶ 0007. (“[T]his design combines the microcontroller 1 and the image sensor 2. This image sensor 2 reads the reference scattered number (degree of analysis) signal of each unit movement in response to control of the microcontroller 1.... After converting and making with a x axis and y axis-coordinates value, it transmits to the microcontroller 1.”); <i>see also</i> ¶ 0006 (“Furthermore, a microcontroller ... transmits to a computer, and the movement speed on the monitor of the cursor of this mouse is changed simply in this way, and it enables ... good move accuracy.”).
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	JP3090806 (U) discloses an improvement upon a standard mouse, thereby rendering it an “adjustable mouse.” A person of ordinary skill in the art would understand that a standard mouse includes two buttons, a left button and a right button (<i>i.e.</i> , a “button set”), for clicking an icon selected by the mouse cursor. To the extent a mouse with a “button set for clicking an icon” was not disclosed in JP3090806 (U), it would have been obvious to incorporate a button set like that disclosed in Chien. <i>See</i> Chien, at Fig. 2. A person of skill in the art would have been motivated to use a mouse with left and right buttons because it is a practical, convenient, and standard mouse configuration and because it would conform to existing devices and therefore consumer expectations.
3.	The apparatus as claimed in claim 2,	JP3090806 (U) discloses an improvement upon a standard mouse, thereby

	'200 Claim Language	JP3090806 (U)
	wherein the button set has a left button and a right button.	rendering it an “adjustable mouse.” A person of ordinary skill in the art would understand that a standard mouse includes two buttons, a left button and a right button (<i>i.e.</i> , a “button set”), for clicking an icon selected by the mouse cursor. To the extent a mouse with a “button set for clicking an icon” was not disclosed in JP3090806 (U), it would have been obvious to incorporate a button set like that disclosed in Chien. <i>See</i> Chien, at Fig. 2. A person of skill in the art would have been motivated to use a mouse with left and right buttons because it is a practical, convenient, and standard mouse configuration and because it would conform to existing devices and therefore consumer expectations.
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	JP3090806 (U) discloses a speed change key or push button 5 that is designed to be manually adjusted. To the extent such a manually speed change key or push button was found not to be configured on a lateral side of a mouse, Chien discloses a mouse with a “changeable input ratio” (Chien, at 1:7-8) where when two switches positioned on the lateral frame of the mouse are pressed, a microprocessor in the mouse multiplies the sliding distance by a predetermined constant. <i>Id.</i> , at 3:10-16. It would have been obvious to position the speed change key or push button like that disclosed in JP3090806 (U) “on a lateral surface of the mouse,” as taught by Chien. A mouse designer has freedom to place switches wherever is most convenient for the user. Placing the resolution setting switch on a lateral surface of the mouse is obvious. A person of skill in the art would have been motivated to place a switch on a lateral surface of the mouse so that users are not confused with the mouse’s normal operation buttons and so that the resolution setting buttons are not depressed accidentally.

	'200 Claim Language	JP3090806 (U)
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	<i>See claim limitation 1A.</i>
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	<i>See claim limitation 1B.</i> Because JP3090806 (U) discloses two <i>or more</i> resolution settings based on degree control analysis, JP3090806 (U) discloses an N-stage switch capable of being switched to one of positions 1 to N, where N is 2 or more. <i>See, e.g., ¶ 0006</i> (“A speed change key or a push button is connected with the microcontroller, 2 or more sets of different analysis degree control programs are incorporated in this microcontroller, and selection use of the mouse of this design is carried out with a speed change key or a push button. When using the above structure, directly by control of this speed change key or a push button, [c]hoose one analysis degree program in a microcontroller, and it enables it to read a picture signal by the speed which is the degree of analysis from which an image sensor differs....”).
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane	<i>See claim limitation 1C.</i>

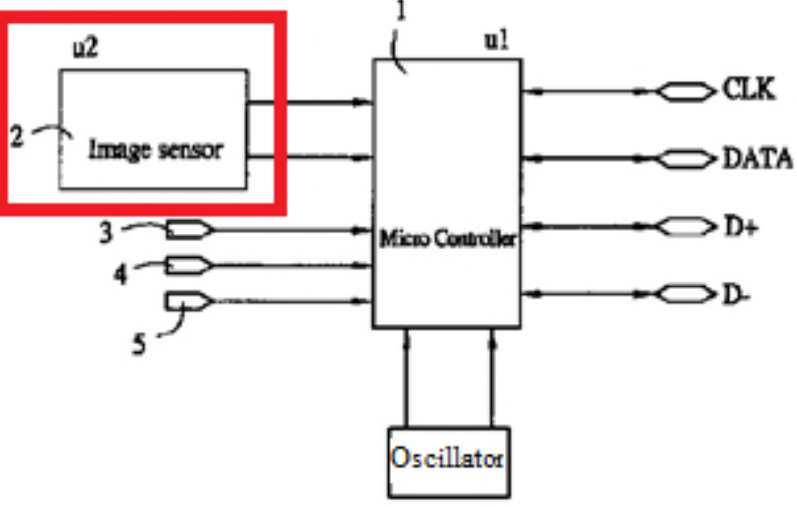
	'200 Claim Language	JP3090806 (U)
	displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	<i>See claim limitation 2.</i>
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	<i>See claim limitation 3.</i>
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	JP3090806 (U) discloses a speed change key or push button 5 that is designed to be manually adjusted. To the extent such a manually speed change key or push button was found not to be configured on a lateral side of a mouse, Chien discloses a mouse with a “changeable input ratio” (Chien, at 1:7-8) where when two switches positioned on the lateral frame of the mouse are pressed, a microprocessor in the mouse multiplies the sliding distance by a predetermined constant. <i>Id.</i> , at 3:10-16. It would have been obvious to position the speed change key or push button like that disclosed in JP3090806 (U) “on a lateral surface of the mouse,” as taught by Chien. A mouse designer has freedom to place switches wherever is most convenient for the user. Placing the resolution setting switch on

	'200 Claim Language	JP3090806 (U)
		a lateral surface of the mouse is obvious. A person of skill in the art would have been motivated to place a switch on a lateral surface of the mouse so that users are not confused with the mouse's normal operation buttons and so that the resolution setting buttons are not depressed accidentally.

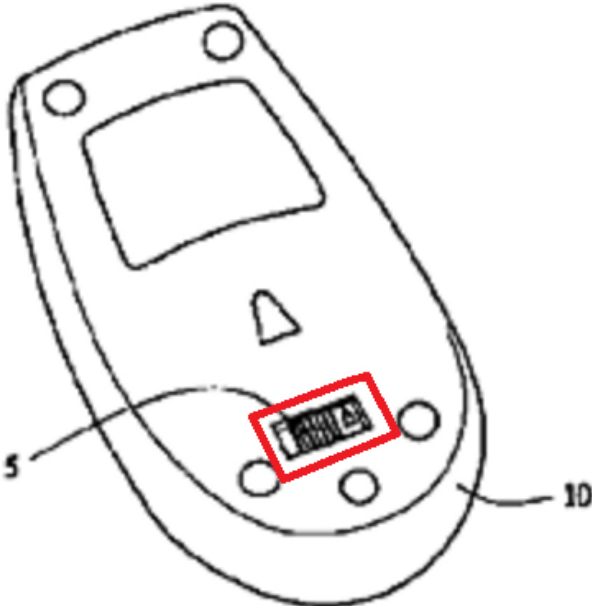
Japanese Utility Model Application U3090806 (“Zhong”), was published on December 26, 2002, over two years before the claimed priority date of the ’200 patent. Accordingly, Zhong constitutes prior art under 35 U.S.C. § 102(b). Zhong anticipates claims 6-8 and renders obvious claims 1-4 and 9 of the ’200 patent for the following reasons.

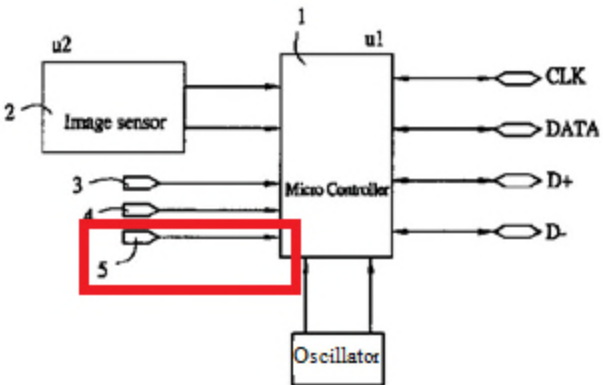
'200 Patent Claim Elements	J.P. U3090806 (“Zhong”)
<p>[1a]: An apparatus for setting multi-stage displacement resolution of a mouse, comprising:</p>	<p>Zhong discloses this claim element. Claim 1 is obvious in light of Zhong and Giorgio or Chien.</p> <p>“(Problem) To provide a mouse with adjustable cursor movement resolution. (Means for solving) A mouse with adjustable cursor movement resolution, wherein an image sensor detects change in movement location and converts it to resolution, acquires x axis and y axis coordinates and sends them to a microcontroller, which sends a signal to a computer, the microcontroller being provided with a key switch set comprising a left, middle and right keys, etc., and a communication switch key, wherein the microcontroller is provided with a speed switch key or pushbutton and has two or more different resolution control programs built in, and one of the resolution programs of the microcontroller is selected through speed switch key or pushbutton control, allowing switching of the reading resolution of the image sensor between high resolution and low resolution and making it possible to change the movement speed of the mouse cursor on the monitor and to obtain good movement precision.”</p> <p>Zhong at Abstract</p> <p>“The present invention pertains to a type of mouse with adjustable cursor movement resolution; specifically, the invention relates to a mouse with adjustable cursor movement resolution having a mouse structure controlled using an image sensor, wherein a speed switch key is provided, by means of which it is possible to select the resolution of the image sensor, i.e. the movement coordinate read speed, and change the movement speed of the mouse cursor on the monitor, which mouse furthermore has relatively good movement accuracy.”</p>

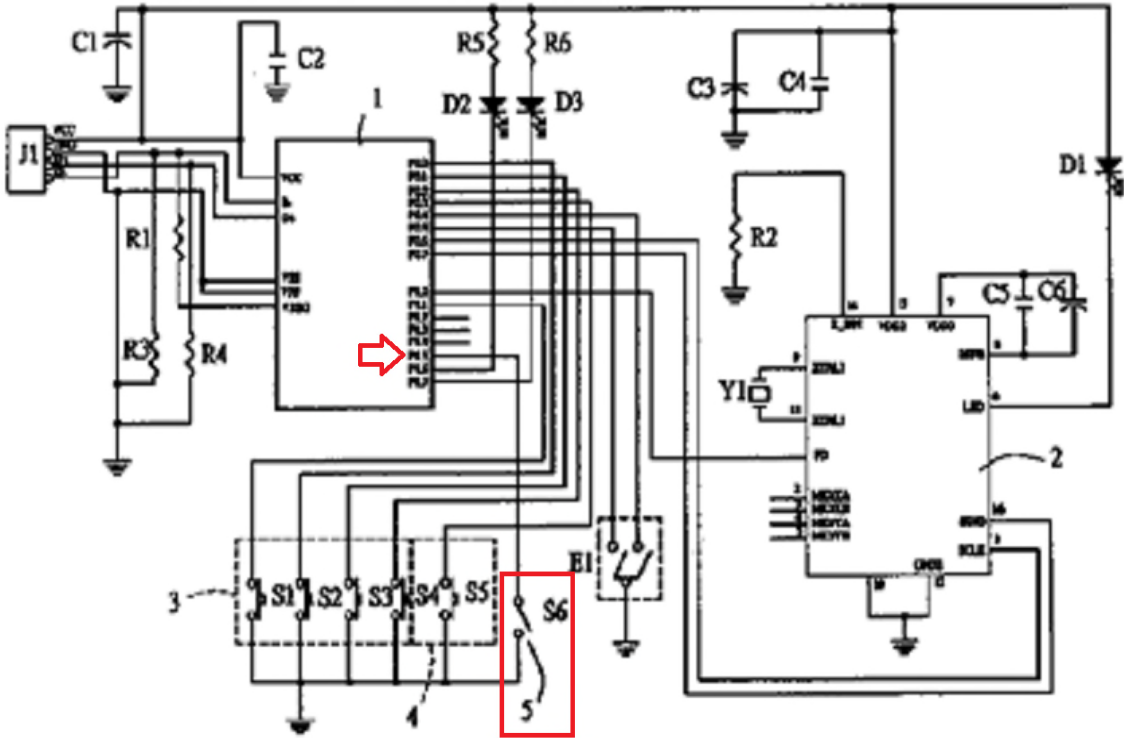
'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p>Zhong at ¶ 1.</p> <p>Chien discloses this claim element. <i>See</i> Exhibit B.</p> <p>Giorgio discloses this claim element. <i>See</i> Exhibit C.</p>
<p>[1b]: a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;</p>	<p>Zhong discloses this claim element.</p> <p>“As shown in FIGS. 1, 2 and 3, the present invention combines a microcontroller 1 and an image sensor 2. Of these, the image sensor 2, under control of the microcontroller 1, reads the reference point count (resolution) of unit movement amounts, converts this to obtain x axis and y axis coordinate values, and then transmits these to the microcontroller 1, which sends these signals to and makes them available for use by a computer; furthermore, a key set 3 of left, middle, right, etc., keys and a PS2 or USB communication switch key 4 are connected to the microcontroller 1. “</p> <p>Zhong at ¶ 7.</p>

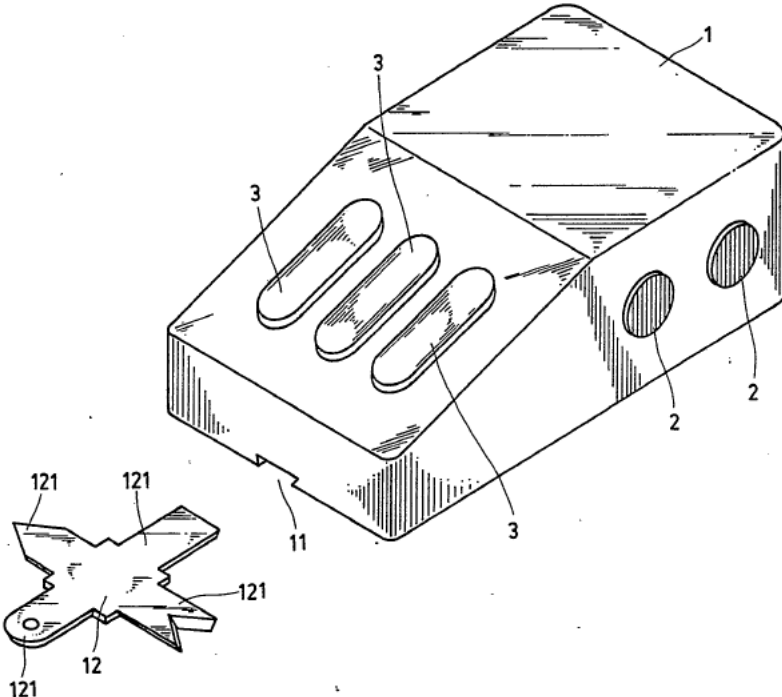
'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p style="text-align: center;">(FIG. 2)</p>  <p>Zhong at Fig. 2 (annotated)</p> <p>Chien discloses this claim element. <i>See</i> Exhibit B.</p> <p>Giorgio discloses this claim element. <i>See</i> Exhibit C.</p>
<p>[1c]: a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and</p>	<p>It would have been obvious to combine Zhong with Chien or Giorgio to produce a mouse having this claim element.</p> <p>The mouse described in Zhong adjusted the mouse resolution based on manual inputs from the user, and not computer software: "Generally, in the case of mice used with computers, after connection thereof and installation of a driver program, the mouse cursor movement speed is set in accordance with a settings value of the driver program. If there is a need to adjust the mouse cursor movement speed due to usage requirements, the adjustment is usually performed through mouse clicks under a Windows operating system. However, such</p>

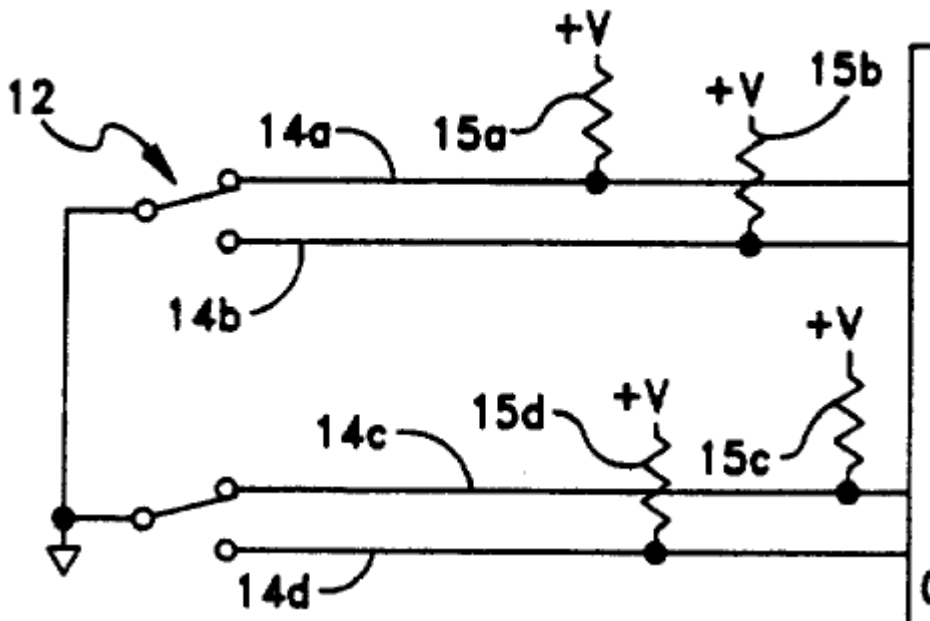
'200 Patent Claim Elements	J.P. U3090806 (“Zhong”)
	<p>adjustment only affects the execution speed of the mouse system and cannot change the resolution during mouse movement (and such known technology only has the function of increasing execution speed and does not have the function of increasing accuracy of resolution). Thus, the cursor movement speed and accuracy adjustment which this accomplishes is limited, and the scheme for carrying this out is relatively laborious and not convenient to use.</p> <p>Known structures include another type of scheme for changing the movement speed of a mouse cursor on a monitor, which uses software computation and processes the coordinate signals (resolution) directly read by the mouse through a multiplication scheme to achieve the object of increasing cursor movement speed. However, this method, when reflecting one coordinate point read by the mouse onto the monitor, changes it to a movement distance of two, three or more coordinate points on the monitor, so movement accuracy of the cursor on the monitor is actually lost, making the method unsuitable for use with high precision screens.”</p> <p>Zhong at ¶¶ 2-3.</p> <p>Zhong disclosed adjusting the resolution <i>directly</i>: “The main object of the present invention consists in providing a type of mouse with adjustable cursor movement resolution, wherein the mouse is provided with a speed switch key, <i>the resolution of the mouse is changed directly through switching operation of the speed switch key</i>, thereby changing the movement speed of the mouse cursor on the monitor, the mouse being provided with good movement accuracy and being convenient in terms of manipulation and use.”</p> <p>Zhong at ¶ 4 (emphasis added).</p> <p>Zhong discloses a switching circuit, the switching circuit having a switch for being manually adjusted to generate the resolution value directly: “A speed switch key or pushbutton 5 is connected to the microcontroller 1, which has two or more different built-in resolution control programs, which are selected and put to use by means of the speed switch key or pushbutton 5.”</p>

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p data-bbox="726 269 898 305">Zhong at ¶ 8.</p> <p data-bbox="898 423 1045 467">(FIG. 3)</p>  <p data-bbox="726 1211 1472 1247">Zhong at Fig. 3 (annotated, showing the switching circuit)</p> <p data-bbox="726 1284 1919 1425">Zhong discloses a switch being coupled to a resolution setting pin, the resolution setting pin having a state determined by the switch coupled thereto: "[T]he mouse with adjustable cursor movement resolution being characterized in that a speed switch key or pushbutton is connected to the microcontroller, two or more different resolution control programs are built</p>

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p>into the microcontroller and made available for use through selection with the speed switch key or pushbutton, and when using the above structure, one resolution program of the microcontroller is selected through control of said speed switch key or pushbutton, the image sensor is made to read an image signal at a speed based on a different resolution, which signal further passes through the microcontroller and is transferred and made available for use to the computer, thereby making it possible to simply change the movement speed of the mouse cursor on the monitor and allowing good movement accuracy to be obtained."</p> <p>Zhong at ¶ 5.</p> <p>(FIG. 2)</p>  <p>Zhong at Fig. 2 (annotated)</p>

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	 <p>Zhong at Fig. 1 (annotated to show the resolution setting-pin and the switching circuit and switch)</p> <p>Although Zhong did not expressly disclose the use of “multiple” switches for adjusting the resolution of the mouse, it would have been obvious to create such a mouse in light of Chien and Giorgio. Zhong states that the goal of the mouse is to allow the sliding switch to control “two <i>or more</i>” resolution control programs. One of ordinary skill in the art would readily recognize that using multiple switches would facilitate controlling more than two resolution control programs. A single switch can represent only two states; two switches,</p>

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p>however, can represent four states. For example, if shown by binary, two switches can represent the four states 00, 01, 10, and 11.</p> <p>Chien GB 2215455A at Fig. 2 discloses two resolution setting switches 2:</p>  <p>The mouse of Zhong could have been readily modified to use two resolution-switches instead of one, as was done in Chien.</p> <p>Giorgio US 5,119,077 at Fig. 1 also discloses two resolution-setting switches 12:</p>

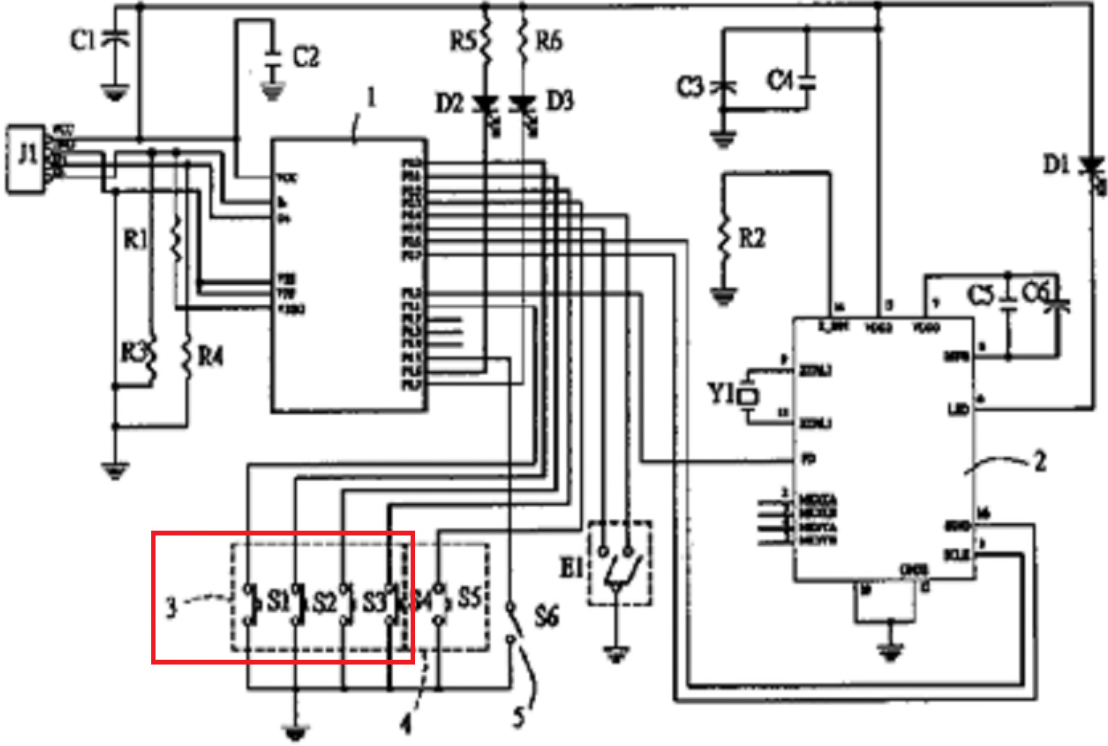
'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	 <p>The mouse of Zhong could have been readily modified to use two resolution-switches instead of one, as was done in Giorgio.</p>
<p>[1d]: a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit,</p>	<p>Zhong discloses this claim element.</p> <p>“The invention of Claim 1 is a mouse with adjustable cursor movement resolution comprising a microcontroller and an image sensor, wherein the image sensor can detect change of movement position, convert it to resolution, acquire x axis and y axis coordinates and send them to the microcontroller, the microcontroller sends signals to a computer, the computer is made to send signals to the microcontroller, and a key switch set comprising left, middle and right keys, etc., and a PS2 or USB communication switch key are connected to the microcontroller”</p> <p>Zhong at ¶ 5.</p>

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<div data-bbox="772 269 1724 889" data-label="Diagram"> </div> <p data-bbox="726 971 1079 1003">Zhong at Fig. 2 (annotated)</p> <p data-bbox="726 1044 1906 1403">Zhong, at a minimum, inherently discloses a register within the microcontroller for storing the resolution value. The microcontroller in Zhong stores multiple programs, each program for use with a particular dpi value, which would require a register: "The mouse 10 of the present invention, as described above, achieves the object of the present invention in that, after the switching control of the speed switch key or pushbutton 5, the appropriate resolution program selection is entered into in the microcontroller 1, and the image sensor 2 is made to read movement amount signals using that selected resolution program. Furthermore, assuming the resolution control program in the microcontroller 1 is divided into two types, one being low resolution (400 dpi) and the other high resolution (800 dpi), if the cursor movement amount on the monitor reflecting a unit movement distance of the</p>

'200 Patent Claim Elements	J.P. U3090806 (“Zhong”)
	<p>mouse 10 is 10 cm when low resolution is selected and used, it becomes possible to change the cursor movement amount on the monitor reflecting a unit movement distance of mouse 10 from 10 cm to 20 cm by switching to the high resolution program of the mouse 10, without changing the resolution of the monitor itself, which allows one to achieve the object of increasing the movement speed of the cursor of the mouse 10 on the monitor and is convenient in terms of user manipulation and control.”</p> <p>Zhong at ¶ 10.</p> <p>Chien discloses this claim element. <i>See</i> Exhibit B.</p> <p>Giorgio discloses this claim element. <i>See</i> Exhibit C.</p>
<p>[1e]: the mouse micro controller determining the resolution value based on the states of the resolution setting pins,</p>	<p>Zhong discloses this claim element.</p> <p>“When using the above structure, if there is need to change the image acquisition resolution or the mouse 10 or the movement speed of the cursor on the monitor, through direct control of the speed switch key or pushbutton 5, one of the resolution control programs (for example, a 400 dpi or 800 dpi mouse resolution program) in the microcontroller 1 is entered into, the image signal is read by the image sensor 2 at the speed given by the selected mouse resolution program, and is transmitted from the microcontroller to the computer and made available for use.”</p> <p>Zhong at ¶ 9.</p> <p>Chien discloses this claim element. <i>See</i> Exhibit B.</p> <p>Giorgio discloses this claim element. <i>See</i> Exhibit C.</p>
<p>[1f]: setting a mouse resolution based on the resolution value and storing the resolution value in the register,</p>	<p>Zhong discloses this claim element.</p> <p>“When using the above structure, if there is need to change the image acquisition resolution or the mouse 10 or the movement speed of the cursor on the monitor, through direct control</p>

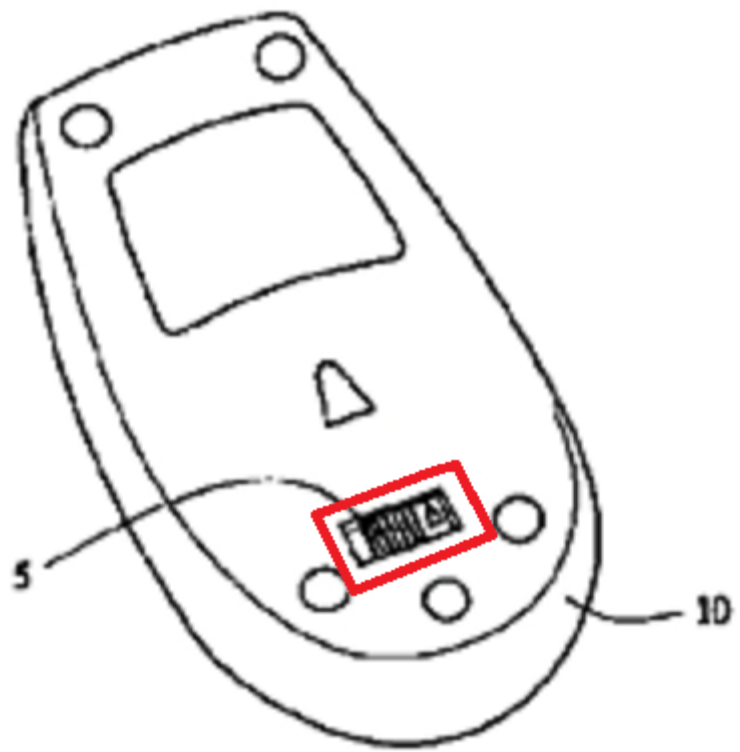
'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p>of the speed switch key or pushbutton 5, one of the resolution control programs (for example, a 400 dpi or 800 dpi mouse resolution program) in the microcontroller 1 is entered into, the image signal is read by the image sensor 2 at the speed given by the selected mouse resolution program, and is transmitted from the microcontroller to the computer and made available for use.</p> <p>The mouse 10 of the present invention, as described above, achieves the object of the present invention in that, after the switching control of the speed switch key or pushbutton 5, the appropriate resolution program selection is entered into in the microcontroller 1, and the image sensor 2 is made to read movement amount signals using that selected resolution program. Furthermore, assuming the resolution control program in the microcontroller 1 is divided into two types, one being low resolution (400 dpi) and the other high resolution (800 dpi), if the cursor movement amount on the monitor reflecting a unit movement distance of the mouse 10 is 10 cm when low resolution is selected and used, it becomes possible to change the cursor movement amount on the monitor reflecting a unit movement distance of mouse 10 from 10 cm to 20 cm by switching to the high resolution program of the mouse 10, without changing the resolution of the monitor itself, which allows one to achieve the object of increasing the movement speed of the cursor of the mouse 10 on the monitor and is convenient in terms of user manipulation and control."</p> <p>Zhong at ¶¶ 9-10.</p> <p>Chien discloses this claim element. <i>See</i> Exhibit B.</p> <p>Giorgio discloses this claim element. <i>See</i> Exhibit C.</p>
[1g]: the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected	<p>Zhong discloses this claim element.</p> <p>"When using the above structure, if there is need to change the image acquisition resolution or the mouse 10 or the movement speed of the cursor on the monitor, through direct control of the speed switch key or pushbutton 5, one of the resolution control programs (for</p>

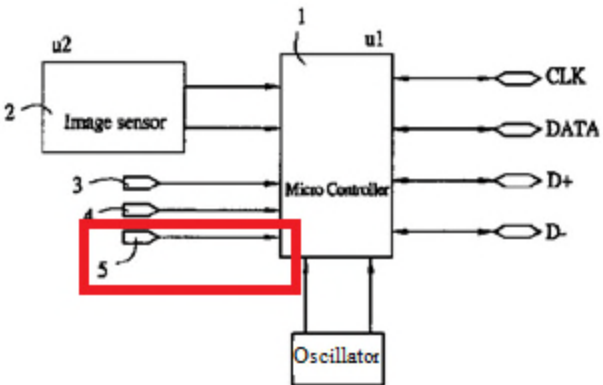
'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
<p>to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.</p>	<p>example, a 400 dpi or 800 dpi mouse resolution program) in the microcontroller 1 is entered into, the image signal is read by the image sensor 2 at the speed given by the selected mouse resolution program, and is transmitted from the microcontroller to the computer and made available for use.</p> <p>The mouse 10 of the present invention, as described above, achieves the object of the present invention in that, after the switching control of the speed switch key or pushbutton 5, the appropriate resolution program selection is entered into in the microcontroller 1, and the image sensor 2 is made to read movement amount signals using that selected resolution program. Furthermore, assuming the resolution control program in the microcontroller 1 is divided into two types, one being low resolution (400 dpi) and the other high resolution (800 dpi), if the cursor movement amount on the monitor reflecting a unit movement distance of the mouse 10 is 10 cm when low resolution is selected and used, it becomes possible to change the cursor movement amount on the monitor reflecting a unit movement distance of mouse 10 from 10 cm to 20 cm by switching to the high resolution program of the mouse 10, without changing the resolution of the monitor itself, which allows one to achieve the object of increasing the movement speed of the cursor of the mouse 10 on the monitor and is convenient in terms of user manipulation and control."</p> <p>Zhong at ¶¶ 9-10.</p> <p>Chien discloses this claim element. <i>See</i> Exhibit B.</p> <p>Giorgio discloses this claim element. <i>See</i> Exhibit C.</p>
<p>[2]: The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.</p>	<p>Zhong discloses this claim element.</p> <p>"As shown in FIGS. 1, 2 and 3, the present invention combines a microcontroller 1 and an image sensor 2. Of these, the image sensor 2, under control of the microcontroller 1, reads the reference point count (resolution) of unit movement amounts, converts this to obtain x axis and y axis coordinate values, and then transmits these to the microcontroller 1, which sends these signals to and makes them available for use by a computer; furthermore, <i>a key</i></p>

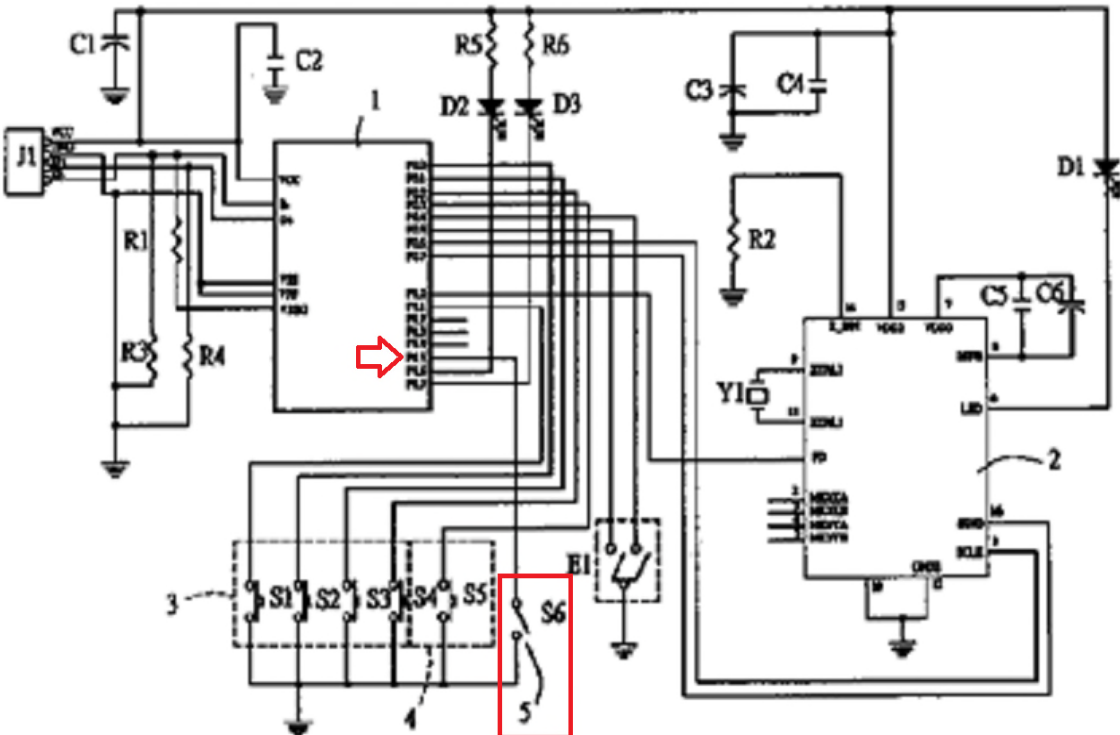
'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p><i>set 3 of left, middle, right, etc., keys and a PS2 or USB communication switch key 4 are connected to the microcontroller 1.</i>"</p> <p>Zhong at ¶ 7 (emphasis added).</p>  <p>The diagram shows a microcontroller (1) connected to various components. A connector J1 is on the left. Resistors R1, R2, R3, R4, R5, and R6 are distributed throughout the circuit. Capacitors C1, C2, C3, C4, C5, and C6 are also present. Diodes D1, D2, and D3 are connected to the microcontroller. A set of switches S1, S2, S3, S4, S5, and S6 is shown at the bottom, with S1-S4 grouped in a red box labeled '3'. A switch S6 is labeled '4'. A motor or actuator (2) is connected to the microcontroller. Other components include a buzzer Y1, a switch E1, and a switch labeled '5'.</p> <p>Zhong at Fig. 1 (annotated)</p>
[3]: The apparatus as claimed in claim 2, wherein the button set has a left	See prior analysis regarding claim 2.

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
button and a right button.	
[4]: The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	Zhong disclosed a switch on the underside of the mouse in Fig. 3. By May 2003, it was extremely common for commercial computer mice to have a resolution adjustment switch configured on a lateral surface of the mouse. To the extent Zhong does not expressly discuss this feature, it would have been obvious to modify the mouse in Zhong to move the switch from the underside to the side of the mouse. The following references disclose a resolution adjustment switch configured on a lateral surface of the mouse: Chien GB 2215455 (Fig. 2), Chien U.S. 4,963,858 (Fig. 2), Canakapalli US 2002/0135563 (Fig. 1), Hatanaka H4-23029 (Fig. 2), Higadishe H4-172522 (discussing the ASCII Article), Hisamatsu H6-102998 (Fig. 3), Kimura 1991-53322 (Fig. 4), Mihara 1991-278219 (Fig. 1), Tomikawa H8-123615 (Figs. 1 and 2), and the ASCII Article (Photos 1 and 2). <i>See also</i> Invalidity Contentions at Section (I)(C)(7).
[6a]: An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	Zhong anticipates claim 6. <i>See</i> prior analysis regarding claim element [1a].
[6b]: a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	<i>See</i> prior analysis regarding claim element [1b].
[6c]: an N-stage switch for setting a resolution value, the N-stage switch circuit having a switching button capable of being manually switched to one of positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	Zhong discloses this claim element. The mouse described in Zhong adjusted the mouse resolution based on manual inputs from the user, and not computer software: "Generally, in the case of mice used with computers, after connection thereof and installation of a driver program, the mouse cursor movement speed is set in accordance with a settings value of the driver program. If there is a need to adjust the mouse cursor movement speed due to usage requirements, the adjustment is usually performed through mouse clicks under a Windows operating system. However, such adjustment only affects the execution speed of the mouse system and cannot change the resolution during mouse movement (and such known technology only has the function of increasing execution speed and does not have the function of increasing accuracy of resolution). Thus, the cursor movement speed and accuracy adjustment which this

'200 Patent Claim Elements	J.P. U3090806 (“Zhong”)
	<p>accomplishes is limited, and the scheme for carrying this out is relatively laborious and not convenient to use.</p> <p>Known structures include another type of scheme for changing the movement speed of a mouse cursor on a monitor, which uses software computation and processes the coordinate signals (resolution) directly read by the mouse through a multiplication scheme to achieve the object of increasing cursor movement speed. However, this method, when reflecting one coordinate point read by the mouse onto the monitor, changes it to a movement distance of two, three or more coordinate points on the monitor, so movement accuracy of the cursor on the monitor is actually lost, making the method unsuitable for use with high precision screens.”</p> <p>Zhong at ¶¶ 2-3.</p> <p>Zhong disclosed adjusting the resolution <i>directly</i>: “The main object of the present invention consists in providing a type of mouse with adjustable cursor movement resolution, wherein the mouse is provided with a speed switch key, <i>the resolution of the mouse is changed directly through switching operation of the speed switch key</i>, thereby changing the movement speed of the mouse cursor on the monitor, the mouse being provided with good movement accuracy and being convenient in terms of manipulation and use.”</p> <p>Zhong at ¶ 4 (emphasis added).</p> <p>Zhong discloses a sliding 2-stage switch for setting a resolution value, the 2-stage switch circuit having a switching button capable of being manually switched to one of positions 1 to N (in this case, N = 2): “A speed switch key or pushbutton 5 is connected to the microcontroller 1, which has two or more different built-in resolution control programs, which are selected and put to use by means of the speed switch key or pushbutton 5.”</p> <p>Zhong at ¶ 8.</p>

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p data-bbox="934 284 1123 341">(FIG. 3)</p>  <p data-bbox="724 1234 1480 1274">Zhong at Fig. 3 (annotated, showing the switching circuit)</p> <p data-bbox="724 1307 1911 1421">Zhong discloses a resolution setting pin to indicate a state: “[T]he mouse with adjustable cursor movement resolution being characterized in that a speed switch key or pushbutton is connected to the microcontroller, two or more different resolution control programs are built</p>

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	<p>into the microcontroller and made available for use through selection with the speed switch key or pushbutton, and when using the above structure, one resolution program of the microcontroller is selected through control of said speed switch key or pushbutton, the image sensor is made to read an image signal at a speed based on a different resolution, which signal further passes through the microcontroller and is transferred and made available for use to the computer, thereby making it possible to simply change the movement speed of the mouse cursor on the monitor and allowing good movement accuracy to be obtained."</p> <p>Zhong at ¶ 5.</p> <p>(FIG. 2)</p>  <p>Zhong at Fig. 2 (annotated)</p>

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
	 <p>Zhong at Fig. 1 (annotated to show the resolution setting-pin and the switching circuit and switch)</p>
[6d]: a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit,	See prior analysis regarding claim element [1d].

'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
[6e]: the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins,	<i>See</i> prior analysis regarding claim element [1e].
[6f]: setting a mouse resolution based on the resolution value and storing the resolution value in the register,	<i>See</i> prior analysis regarding claim element [1f].
[6g]: the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	<i>See</i> prior analysis regarding claim element [1g].
[7]: The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	<i>See</i> prior analysis regarding claim element 2.
[8]: The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	<i>See</i> prior analysis regarding claim element 3.
[9]: The apparatus as claimed in claim 6, wherein the N-stage	<i>See</i> prior analysis regarding claim element 4.


'200 Patent Claim Elements	J.P. U3090806 ("Zhong")
switch is configured on a lateral surface of the mouse.	

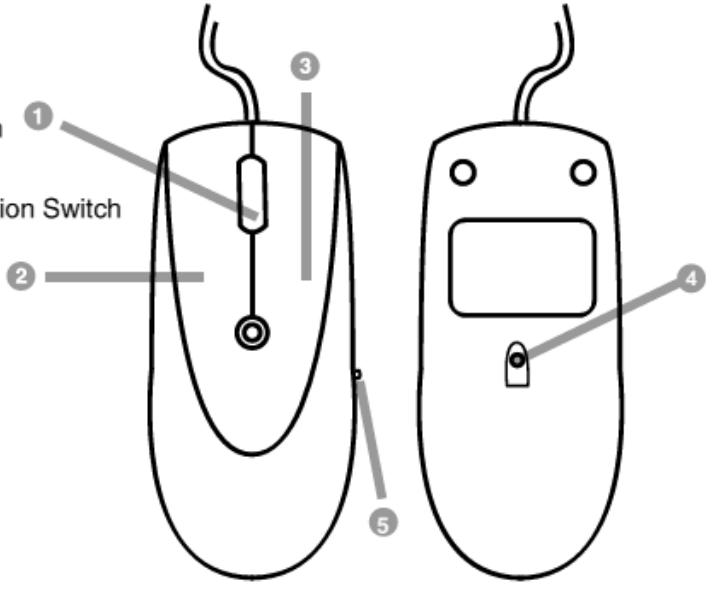
Invalidity of U.S. Patent No. 7,532,200 by IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product and Manual

Based upon the claim interpretations Better Mouse Company, LLC (“BMC”) appears to be asserting and the applications of those interpretations to Defendants’ products in BMC’s Infringement Contentions, the IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, <http://www.iogear.com/support/manual/GME222%20manual.pdf> and the IOGEAR GME 222 800 dpi USB Optical Mini Mouse anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants’ Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

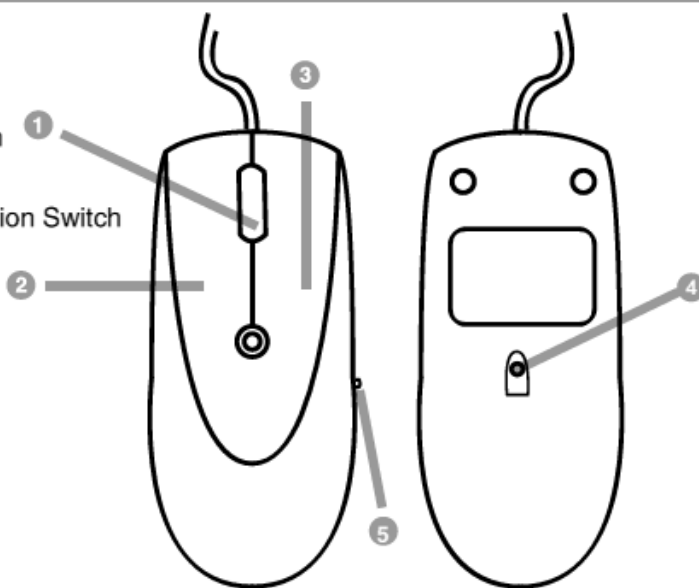
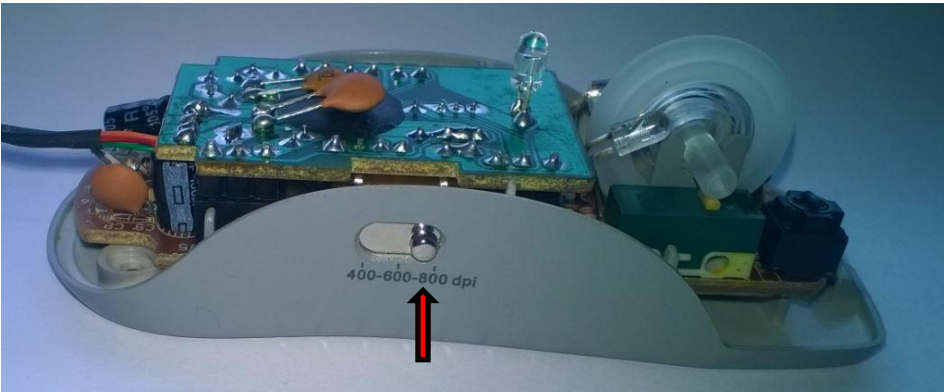
	‘200 Claim Language	Disclosure
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	<i>See, e.g.,</i> IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf . <i>See claim limitation 6.</i>
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	<i>See, e.g.,</i> IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.” <i>See claim limitation 6A.</i>
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	<i>See, e.g.,</i> IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.” <i>See claim limitation 6B.</i>
1C	a mouse micro controller with a register, coupled to the X-Y	<i>See, e.g.,</i> IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf

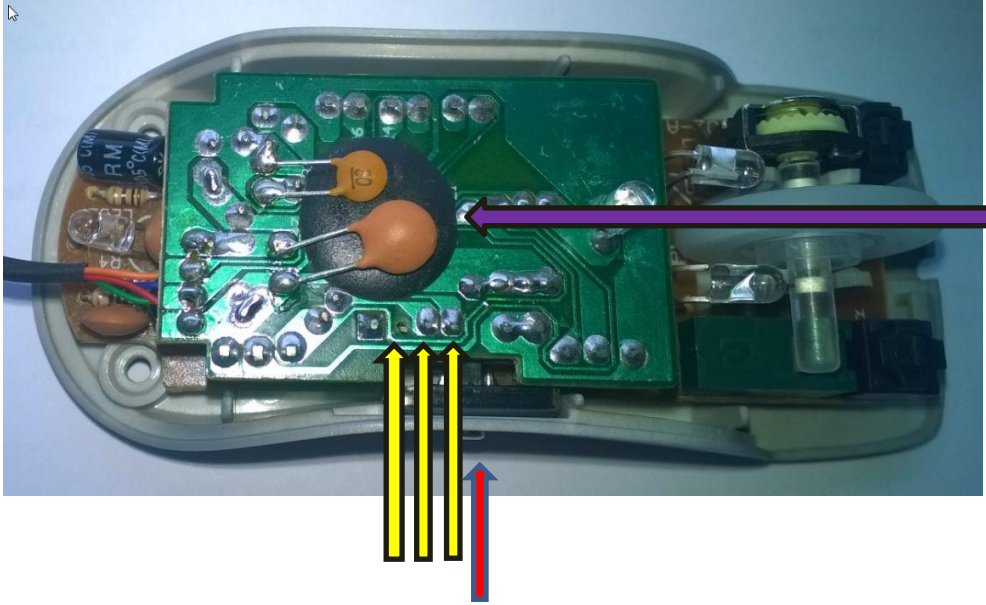
	'200 Claim Language	Disclosure
	axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	<i>See claim limitation 6C.</i>
2	2. The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	<i>See, e.g., IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 "Pictorial Introduction."</i> <i>See claim limitation 7.</i>
3	3. The apparatus as claimed in claim 2, wherein the button set	<i>See, e.g., IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 "Pictorial</i>

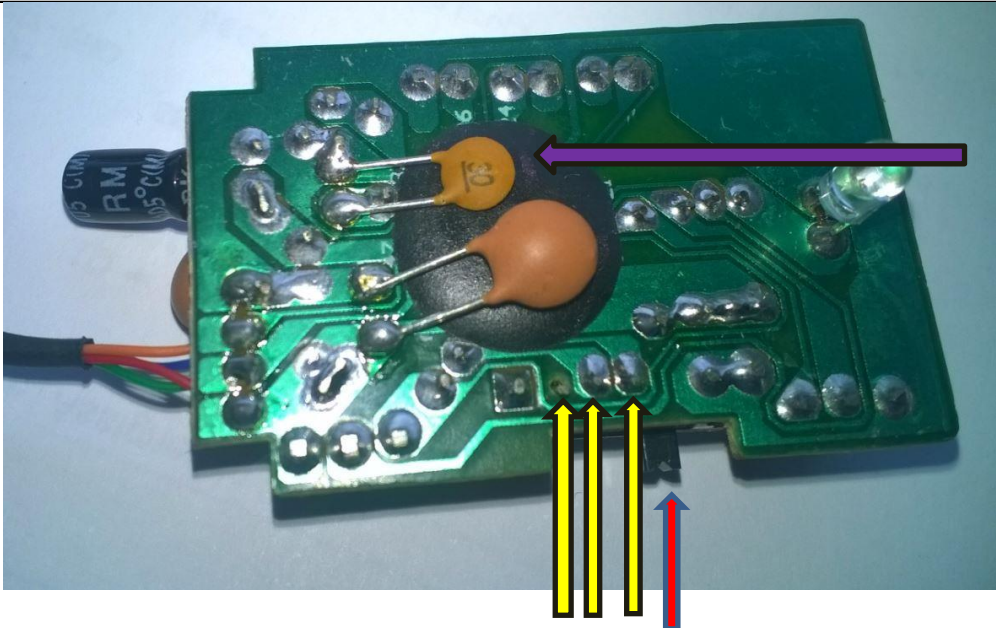
	'200 Claim Language	Disclosure
	has a left button and a right button.	Introduction.” <i>See claim limitation 8.</i>
4	4. The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	<i>See, e.g.,</i> IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.” <i>See claim limitation 9.</i>
6	6. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	<i>See claim limitation 1.</i> The IOGEAR GME 222 800 dpi USB Optical Mini Mouse is an apparatus for setting multi-stage displacement resolution of a mouse. 

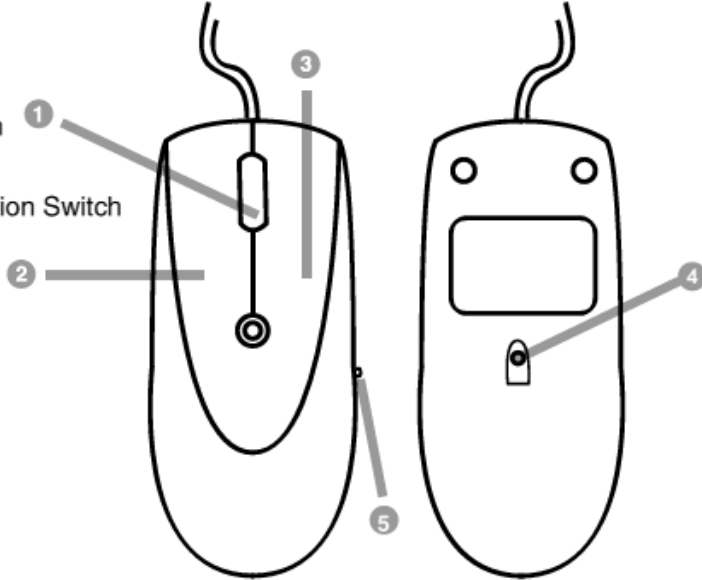
	'200 Claim Language	Disclosure
		<p>See, e.g., IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.”</p> <p>5. Pictorial Introduction</p>  <p>The diagram shows two views of the mouse. The left view is a top-down perspective showing the scroll wheel (1), left click button (2), right click button (3), and optical sensor (4). The right view is a bottom-up perspective showing the resolution selection switch (5). The callouts are as follows: 1 points to the scroll wheel, 2 points to the left click button, 3 points to the right click button, 4 points to the optical sensor, and 5 points to the resolution selection switch.</p>
6A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	<p>See claim limitation 1A.</p> <p>The IOGEAR GME 222 800 dpi USB Optical Mini Mouse has a PAN 101 BOI-208 “CMOS process optical navigation sensor with DSP integration chip,” made by PixArt Imaging, Inc.</p>

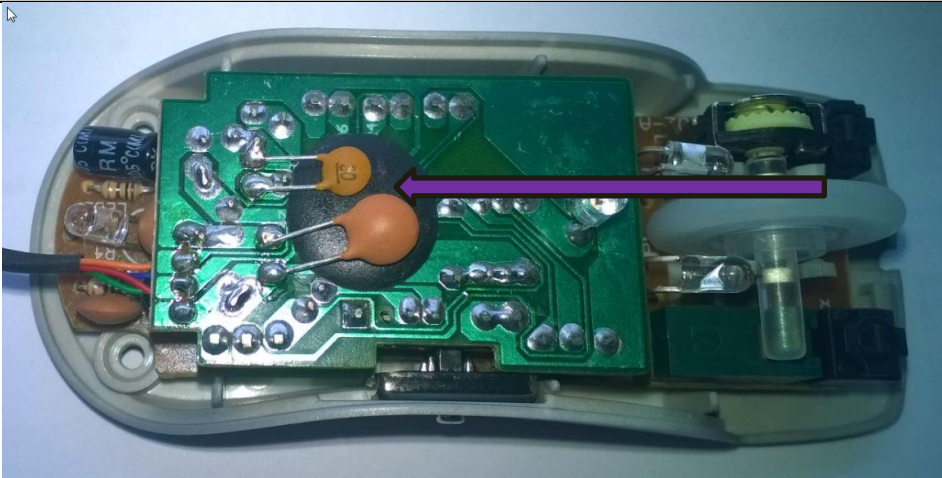
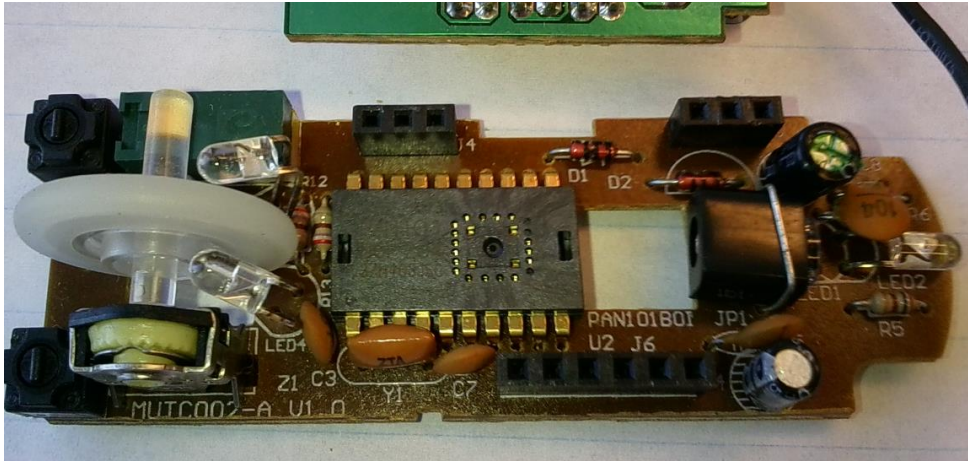
	'200 Claim Language	Disclosure
		 <p data-bbox="741 894 1837 998">See, e.g., IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.”</p>

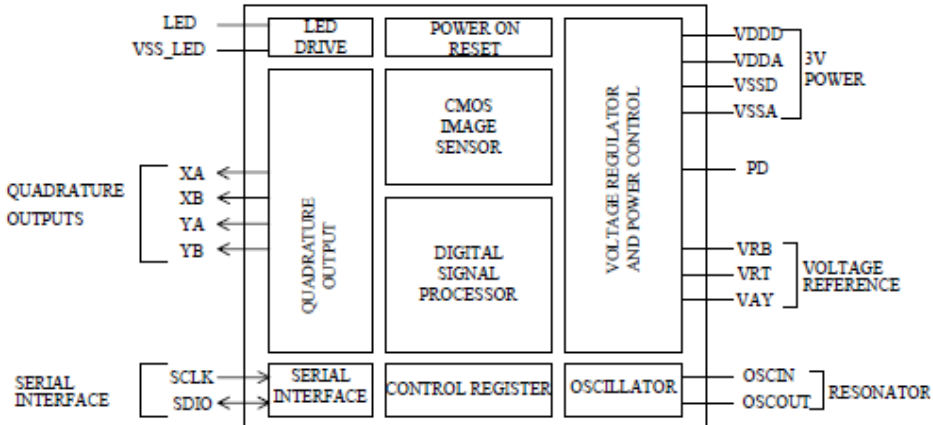
	'200 Claim Language	Disclosure
		<p>5. Pictorial Introduction</p>  <p>1. Scroll Wheel 2. Left Click Button 3. Right Click Button 4. Optical Sensor 5. Resolution Selection Switch</p>
6B	<p>an N-stage switch for setting a resolution value, the N-stage switch circuit having a switching button capable of being manually switched to one of positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and</p>	<p><i>See claim limitation 1B.</i></p> <p>The N-stage switch is indicated by the red arrow. Three possible resolution values are indicated</p> 

	'200 Claim Language	Disclosure
		<p data-bbox="741 269 1772 412">The N-Stage Switch is indicated by the red arrow The micro controller unit is located under the protective resin as indicated by the purple arrow Each of the three resolution setting pins are indicated by the yellow arrows.</p> 

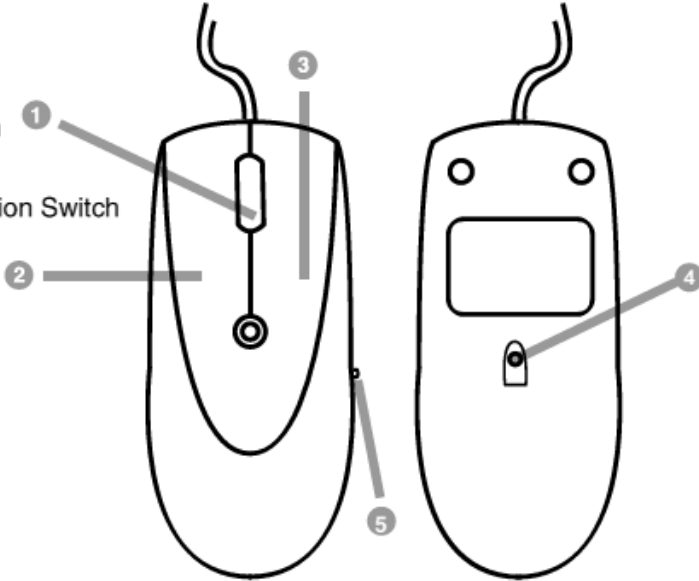
	'200 Claim Language	Disclosure
		 <p data-bbox="741 852 1818 959">See, e.g., IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.”</p>

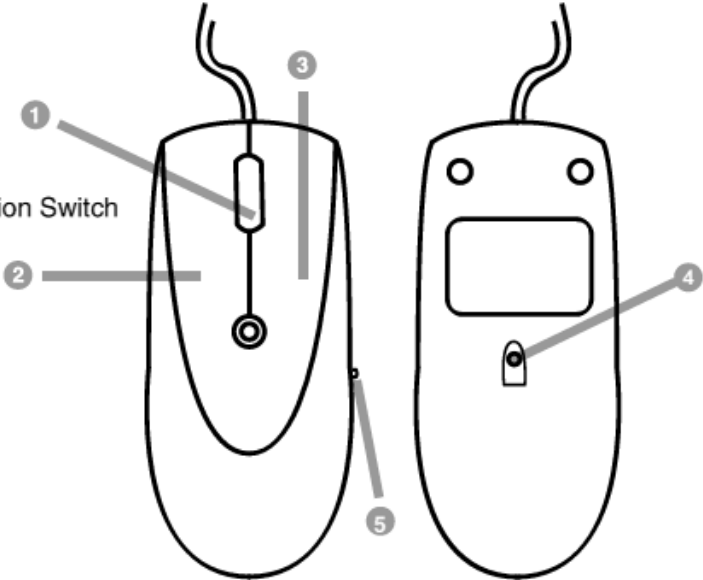
	'200 Claim Language	Disclosure
		<p data-bbox="800 245 1755 289">5. Pictorial Introduction</p> <div data-bbox="793 331 1157 521"> <p>1. Scroll Wheel 2. Left Click Button 3. Right Click Button 4. Optical Sensor 5. Resolution Selection Switch</p> </div> 
6C	<p>a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller</p>	<p><i>See claim limitation 1C.</i></p>

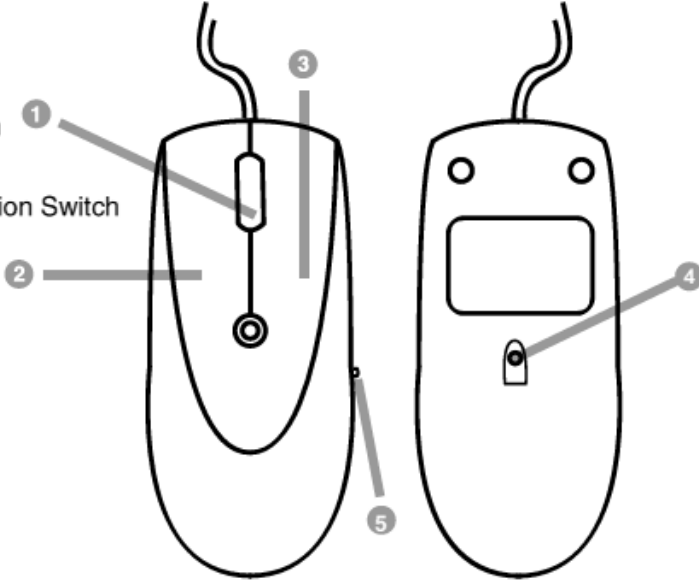
'200 Claim Language	Disclosure
<p>responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.</p>	 <p>The IOGEAR GME 222 800 dpi USB Optical Mini Mouse has a PAN 101 BOI-208 “CMOS process optical navigation sensor with DSP integration chip,” made by PixArt Imaging, Inc.</p> 

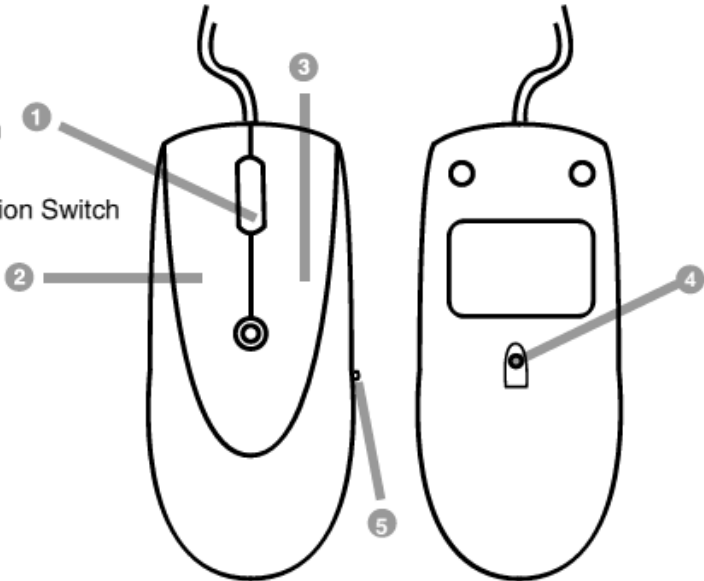
'200 Claim Language	Disclosure				
	<p>The datasheet reviewed for the PAN 101 chip shows that it includes a Digital Signal Processor and a Register.</p> <p>2. Block Diagram and Operation</p>  <p>Two of the registers (0x02, 0x05) include bits holding resolution value</p> <table><tr><th>REGISTER</th><th>REGISTER VALUE AND ASSOCIATED</th></tr><tr><td>RES</td><td>Resolution in counts per inch 0 = 800 (Default @ PAN101BXX-208) 1 = 400 (Default @ PAN101BXX-204)</td></tr></table>	REGISTER	REGISTER VALUE AND ASSOCIATED	RES	Resolution in counts per inch 0 = 800 (Default @ PAN101BXX-208) 1 = 400 (Default @ PAN101BXX-204)
REGISTER	REGISTER VALUE AND ASSOCIATED				
RES	Resolution in counts per inch 0 = 800 (Default @ PAN101BXX-208) 1 = 400 (Default @ PAN101BXX-204)				

	'200 Claim Language	Disclosure
		<p>Figure 16. Application circuit using serial interface with PAN101BOI</p> <p>See, e.g., IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.”</p>

	'200 Claim Language	Disclosure
		<p data-bbox="758 245 1703 289">5. Pictorial Introduction</p> <div data-bbox="743 331 1104 521"> <p>1. Scroll Wheel 2. Left Click Button 3. Right Click Button 4. Optical Sensor 5. Resolution Selection Switch</p> </div> 
7	7. The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	<p data-bbox="743 1003 1024 1036"><i>See claim limitation 2.</i></p> <p data-bbox="743 1078 1818 1182"><i>See, e.g., IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.”</i></p>

	'200 Claim Language	Disclosure
		<p data-bbox="758 248 1108 280">5. Pictorial Introduction</p> <div data-bbox="741 329 1108 521"><p data-bbox="741 329 1108 521">1. Scroll Wheel 2. Left Click Button 3. Right Click Button 4. Optical Sensor 5. Resolution Selection Switch</p></div>  <p>The diagram shows two computer mice. The mouse on the left is a standard three-button mouse with a scroll wheel. Callout 1 points to the scroll wheel, callout 2 points to the left click button, callout 3 points to the right click button, and callout 5 points to a small switch on the side. The mouse on the right is a more compact, vertical mouse with a rectangular sensor area. Callout 4 points to this sensor area.</p>

	'200 Claim Language	Disclosure
		<p data-bbox="758 245 1703 289">5. Pictorial Introduction</p> <div data-bbox="743 331 1104 516"> <p>1. Scroll Wheel 2. Left Click Button 3. Right Click Button 4. Optical Sensor 5. Resolution Selection Switch</p> </div> 
8	8. The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	<p data-bbox="743 971 1024 998"><i>See claim limitation 3.</i></p> <p data-bbox="743 1042 1818 1141"><i>See, e.g., IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.”</i></p>

	'200 Claim Language	Disclosure
		<p data-bbox="800 245 1755 289">5. Pictorial Introduction</p>  <p data-bbox="800 332 1157 521"> 1. Scroll Wheel 2. Left Click Button 3. Right Click Button 4. Optical Sensor 5. Resolution Selection Switch </p>
9	9. The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	<p data-bbox="741 933 1818 1036"><i>See, e.g.,</i> IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 “Pictorial Introduction.”</p> <p data-bbox="741 1079 1801 1182">The IOGEAR GME 222 800 dpi USB Optical Mini Mouse is a USB optical mouse with a sliding switch on the side of the mouse for manual adjustment of cursor resolution.</p>

	'200 Claim Language	Disclosure
		